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	Mag.	Colour.	Means.		
			Date.	Mag.	Colour.
1901 Jan. 21	7·9	7	1901·3	7·78	6·8
Mar. 22	7·7	6·5			
June 8	7·75	7			
1902 Jan. 26	7·7	6·5	1902·1	7·72	6·5
Feb. 1	7·65	6·5			
8	7·8	6·5			

Telescope, 7-in. Merz equatorial, as before.

Royal Observatory Cape of Good Hope:
1902 *February* 10.

Note on Professor Turner's Recent Paper on Photographic Surveying. By H. G. Fourcade.

(*Communicated by Sir David Gill.*)

In the *Monthly Notices* for December 1901 there appears a paper by Professor Turner, F.R.S., on "A Simple Method of Accurate Surveying with an Ordinary Camera."

The first method noticed by Professor Turner, in which a pair of views is taken at right angles to a base line, has, in its simple form, been used by me for some years, and, improved in respect of speed, convenience, and accuracy by the proposed adoption of a stereoscopic measuring instrument combining some of the features of stereoscopic range-finders and measuring machines for stellar photographs, it is described in a paper read before the South African Philosophical Society on October 2, 1901.

The second method in which the pair of views is taken in the direction of the base line was not considered by me, because it does not lend itself to stereoscopic measurement. It is due to Dr. G. Le Bon (*Les Levers Photographiques et la Photographie en Voyage*, 1889) and will be found described in J. A. Flemer's "Photographic Methods and Instruments" (App. No. 10, *U.S. Coast and Geodetic Survey Report for* 1897).

Forest Department, Cape Town:
1902 *February* 10.

The "Green Flash." By T. W. Backhouse.

I do not know whether there are different phenomena that go by this name, but having seen it several times when the Sun has been setting in the sea I can give a much simpler explanation of

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it as seen by me than that given by W. H. Pickering (*Monthly Notices*, vol. lxii. p. 85).

When the Sun is seen through a telescope low down it is bordered at its lower edge, owing to refraction, with the red end of the spectrum, which looks on the whole red or orange-red, while at its upper edge it is bordered with the violet end, which is on the whole green, the extreme end of the spectrum being of course absorbed by the atmosphere. The edges necessarily boil much, but the last portion to set must naturally be a part of the green upper edge, and although I have not observed the green flash with the telescope it is obvious that it is this green edge that is last seen by the naked eye; the boiling of the edge will no doubt account for the appearance like Baily's beads described by one observer with instrumental means.

West Hendon House, Sunderland:
1902 *Jan.* 16.

Note on the "Green Flash" at Sunset.

By Major E. H. Hills, R.E.

The notes on this subject by Mr. W. H. Pickering (*Monthly Notices*, lxii. p. 85, 1901 November) and Mr. Backhouse above have suggested to me that it may be of some interest if I give a short account of my observations of this phenomenon and of the conclusions I have reached as to its cause. There is, I believe, no doubt that it is of spectral origin, the green being the visually predominant colour in a solar spectrum which attains the requisite degree of purity when the light source, namely the diminishing segment of the Sun's disc, becomes narrow.

If this explanation be the correct one, it will follow that, though the green may be by far the strongest colour, it will not be the last one visible, and a careful scrutiny, under suitable telescopic power, should reveal the more refrangible parts of the expiring spectrum, and thus, as the last portion of the Sun's rim finally disappears below the horizon, we should see the green fade away into blue and violet.

This I have actually observed at least twice, and I have no reason to doubt that it is visible at any time that the atmospheric conditions favour the appearance of a strong green flash.

In observing I used a Zeiss binocular, with a magnifying power of 12 diameters, and was careful to avoid eye fatigue by looking at the Sun only when a very small portion remained above the horizon. Under these circumstances the narrowing segment, which is, of course, of an orange-red colour, is first seen to turn green at its two extremities; the green colour then appears to run inwards until the whole area of the segment appears coloured.

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